

DRAFT

Southwest Region - The Nature Conservancy Prairies

Niawathe Prairie
Mount Vernon Prairie
Wah-Sha-She Prairie
Pawhuska Prairie

Ten-Year Area Management Plan FY 2015-2024



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OVERVIEW

| Area Name | Area Number | Year Acquired* | Acreage | County | Administrative Responsibility | Maintenance Responsibility |
|----------------------|-------------|---|---------|----------|-------------------------------|----------------------------|
| Niawathe Prairie | 7410 | 80 ac. in 1973; 80 ac. in 1983; MDC 160 ac. in 1978 | 320 | Dade | Wildlife | Wildlife |
| Mount Vernon Prairie | 7412 | 1974 | 40 | Lawrence | Wildlife | Wildlife |
| Wah-Sha-She Prairie | 7411 | 1973 | 160 | Jasper | Wildlife | Wildlife |
| Pawhuska Prairie | 7408 | 1973 | 77 | Barton | Wildlife | Wildlife |

*The prairies in this plan are owned by The Nature Conservancy. The Missouri Department of Conservation (the Department) leases these lands from The Nature Conservancy and manages them under a renewable 10 year cooperative agreement. The current agreement will expire in 2016. One exception is a 160-acre portion of Niawathe Prairie, which is owned by the Department.

Statements of Purpose:

A. Strategic Direction

Manage areas for a diverse suite of native prairie flora and fauna using a variety of grassland management techniques.

B. Desired Future Condition

The desired future condition is a functional native prairie community that meets the resource needs of a variety of grassland plants and animal species.

C. Federal Aid Statement

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

| Area Name | Priority Areas | Natural Areas |
|----------------------|---|--|
| Niawathe Prairie | Golden Prairie Grasslands Conservation Opportunity Area; Audubon Important Bird Area; National Bird Conservation Initiative Priority Area; Grassland Coalition Priority Site; The Nature Conservancy Priority Landscape; Cedar Creek Priority Watershed | Niawathe Prairie Natural Area (240 acres) |
| Mount Vernon Prairie | None | Mount Vernon Prairie Natural Area (40 acres) |
| Wah-Sha-She Prairie | Western Cherokee Grasslands Conservation Opportunity Area; Shawnee Trails Conservation Opportunity Area; Blackberry Creek Aquatic Conservation Opportunity Area | Wah-Sha-She Prairie Natural Area (160 acres) |
| Pawhuska Prairie | None | Pawhuska Prairie Natural Area (77 acres) |

II. Important Natural Features and Resources

| Area Name | Species of Conservation Concern | Caves | Springs |
|----------------------|---------------------------------|-------|--|
| Niawathe Prairie | Yes ¹ | None | None |
| Mount Vernon Prairie | Yes ¹ | None | None |
| Wah-Sha-She Prairie | Yes ¹ | None | None |
| Pawhuska Prairie | Yes ¹ | None | 1 in the western portion of the area within the draw |

¹ Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

III. Existing Infrastructure

| Area Name | Parking Area # | Lakes/Ponds |
|-----------------------|----------------|-------------|
| Niawathe Prairie | 1 | 2 ponds |
| Mount. Vernon Prairie | 1 | None |
| Wah-Sha-She Prairie | 1 | None |
| Pawhuska Prairie | None | None |

IV. Area Restrictions or Limitations

| Area Name | Deed Restrictions | Federal Interest | Easements | Cultural Resources | Hazards | Endangered Species | Boundary Issues |
|----------------------|-------------------|------------------|------------------|--------------------|---------------|--------------------|-----------------|
| Niawathe Prairie | Yes ¹ | Yes ² | None | None known | None observed | Yes ⁴ | None |
| Mount Vernon Prairie | Yes ¹ | Yes ² | Yes ³ | None known | None observed | None observed | None |
| Wah-Sha-She Prairie | Yes ¹ | Yes ² | None | None known | None observed | Yes ⁴ | None |
| Pawhuska Prairie | Yes ¹ | Yes ² | None | None known | None observed | Yes ⁴ | None |

¹ These areas are owned by The Nature Conservancy and managed under a cooperative agreement since 1974. The current agreement expires in 2016. One exception is a 160-acre portion of Niawathe Prairie, which is owned by the Department.

² Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.

³ Ozark Electric Cooperative easement

⁴ Endangered Species are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Native prairie is one of the rarest natural communities in Missouri. Management of these four prairie areas will focus on maintaining and enhancing the species that use these native prairie communities. Priority will be placed on preventing degradation and increasing biotic diversity using approved management tools and practices.

Challenges and Opportunities:

- 1) Control exotic species.
- 2) Manage woody vegetation.

Management Objective 1: Maintain or increase vegetative diversity and structure of native grasslands and provide critical habitat for grassland-dependent fauna.

Strategy 1: Attempt to keep tree and shrub heights under 15 feet. (Wildlife)

Strategy 2: Utilize prescribed burning, grazing (only if authorized by The Nature Conservancy and after Department approval procedures), mowing, herbicide application and haying as management tools, where possible and appropriate. (Wildlife)

Strategy 3: Maintain a one to three year prescribed burn frequency on grassland units to provide brood-rearing habitat, stimulate forbs and seed production and increase plant diversity. (Wildlife)

Strategy 4: Reduce/eradicate exotic species without significantly impacting native grasses and forbs. (Wildlife)

Management Objective 2: Work with interested adjoining landowners to enhance their properties.

Strategy 1: Inventory all adjacent land around listed prairies to determine existing land use. (Wildlife, Private Land Services)

Strategy 2: Work with interested adjacent landowners to address existing exotic or invasive species that threaten the native prairie. (Wildlife, Private Land Services)

Strategy 3: Work with county road districts to control unwanted invasive or exotic species in road rights of way. (Wildlife, Private Land Services)

VI. Aquatic Resource Management Considerations

Aquatic features on these prairies consist of small drainages, headwater streams, small ponds and a wetland. The impoundments on these prairies are not managed for fishing. One of the stream systems originating on Niawathe Prairie has been converted to a grassed waterway just downstream and outside of the area boundary. A review of older aerial photos and topographic maps indicated that this conversion included straightening the channel, which can lead to streambed instability in upstream reaches. Headwater streams can be impacted by off-property activities and management.

Challenges and Opportunities:

- 1) Niawathe Prairie: Manage two ponds and six headwater streams.
- 2) Wah-Sha-She Prairie: Manage a 10-acre wetland and headwater stream.
- 3) Pawhuska Prairie: Manage four headwater streams, a spring and the area bordering second-order stream.

Management Objective 1: Maintain and/or enhance functionality and quality of headwater streams and ponds on these prairies.

Strategy 1: Continue to implement stream best management practices as outlined in the Department's *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation* (2009). (Wildlife, Fisheries)

Strategy 2: Develop a grazing plan prior to introduction of livestock through Wildlife and Fisheries Divisions in cooperation with The Nature Conservancy. (Wildlife, Fisheries)

Strategy 3: Address channel instability, as needed. (Fisheries)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Increase public awareness and use of these areas.
- 2) Maintain public access to the area.

Management Objective 1: Maintain suitable public access at each area.

Strategy 1: Maintain parking areas that are aesthetically pleasing and inviting to area users. (Wildlife)

Management Objective 2: Inform the public of the opportunities at these areas.

Strategy 1: Maintain signage at the accesses in accordance with Department policy. (Wildlife)

Strategy 2: Work with local media specialist to highlight area resources in various Department publications and digital media (Outreach and Education, Wildlife)

Strategy 3: Provide information at area bulletin boards highlighting the uniqueness and value of the resources on the area. (Outreach and Education, Wildlife)

Strategy 4: Target Missouri Master Naturalist, Missouri Native Plant Society, and Audubon Chapters in Springfield and Joplin to utilize these prairies for educational/training and volunteer purposes.

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Ensure all easements are properly documented and filed.
- 2) Evaluate land offered as additions to these areas.

APPENDICES

References:

Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and waters managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.

Appendices:

- Appendix 1. Niawathe Prairie Background
- Appendix 2. Map of Niawathe Prairie Conservation Area
- Appendix 3. Mount Vernon Prairie Background
- Appendix 4. Map of Mount Vernon Prairie
- Appendix 5. Wah-Sha-She Prairie Background
- Appendix 6. Map of Wah-Sha-She Prairie
- Appendix 7. Pawhuska Prairie Area Background
- Appendix 8. Map of Pawhuska Prairie

Appendix 1. Niawathe Prairie Background

Niawathe Prairie was purchased in three tracts: the northern 80 acres by The Nature Conservancy in 1973; the central 160 acres by the Department in 1978; and the southern 80 acres by The Nature Conservancy in 1983. The Nature Conservancy purchased their tracts, now leased to Department for management, with funds provided by Miss Katherine Ordway. The area is named after the Osage Indian name for “life giver of the Tzi-Sho” (The Sky People of the Osages). Management of the Niawathe landscape prior to purchase was primarily annual haying with some light winter grazing within the northern two-thirds of the area. The soils on this prairie vary from a fine sandy loam to a silty loam formed from sandstone and shale residuum. Bedrock varies from 0-50 inches below the surface. There are two small ponds on the area. In addition, seeps within the draws carry water for most of the year. The northern 80 acres of the area was designated as a Missouri Natural Area Aug. 26, 1975. The central 160 acres of the area was designated as a Missouri Natural Area Feb. 17, 1978.

Legal Description: Township 32 North, Range 28 W, Section 14.

Area Location: Niawathe Prairie Conservation Area is located 1 mile west of Highway 97 on Route E. Parking lot is located 0.5 miles north of this intersection.

Current Land and Water Types:

| Land/Water Type | Acres | Miles | % of Area |
|-----------------|------------|-------|------------|
| Native Prairie | 319.5 | | 99.8 |
| Impounded Water | 0.5 | | 0.2 |
| Total | 320 | | 100 |
| Stream Frontage | | 0.9 | |

Appendix 2. Map of Niawathe Prairie Conservation Area

NIAWATHE PRAIRIE CONSERVATION AREA

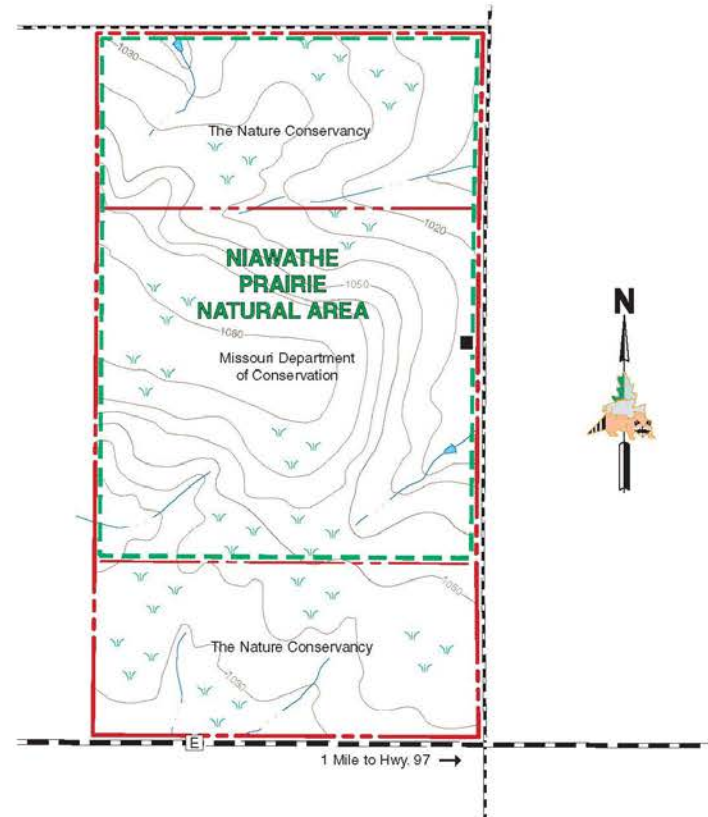
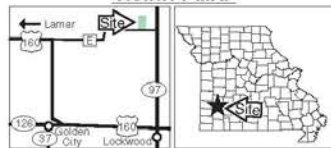
DADE COUNTY
320 ACRES



LEGEND

| | |
|----------------|------------------------------------|
| Boundary | Red dashed line |
| Paved Road | Black dashed line |
| Gravel Road | Black dashed line with cross-ticks |
| Drainage | Blue line with arrows |
| Parking Lot | Black square |
| Pond | Blue shape |
| Native Prairie | Green wavy lines |
| Topography | Brown contour lines |
| Natural Area | Green dashed line |

VICINITY MAP



Appendix 3. Mount Vernon Prairie Background

Mount Vernon Prairie was purchased by The Nature Conservancy in 1974. The area is named after the town of Mount Vernon and in bicentennial recognition of George Washington's home. Prior to being purchased, this area was hayed annually. The soil on this prairie is a silty loam formed from cherty limestone residuum. The bedrock is over 60 inches below the surface. A fragipan occurs at a depth of 19-36 inches. The soil is identified as a Hoberg silt loam. The area was designated as a Missouri Natural Area April 16, 1976.

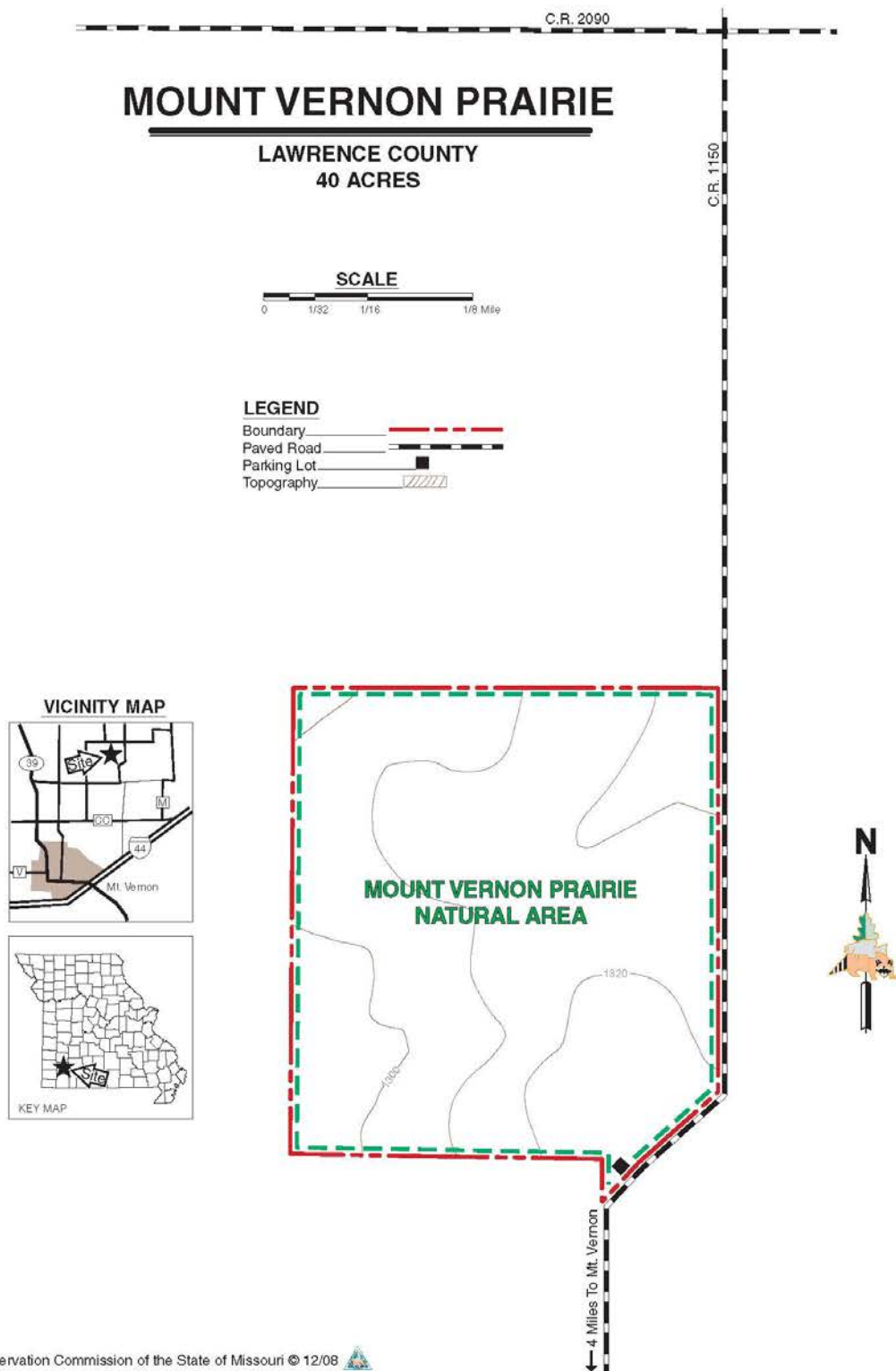
Legal Description: Township 28 North, Range 26 W, Section 17.

Area Location: Proceed north of Mount Vernon on Highway 39, go approximately 1 mile to County Road 2100, then turn right. Go approximately 2.5 miles to County Road 1150 and turn left. Go approximately 0.5 miles to parking lot.

Current Land and Water Types:

| Land/Water Type | Acres | Miles | % of Area |
|-----------------|-------|-------|-----------|
| Native Prairie | 40 | | 100 |
| Stream Frontage | | N/A | |

Appendix 4. Map of Mount Vernon Prairie



Appendix 5. Wah-Sha-She Prairie Background

Wa-Sha-She Prairie was purchased by The Nature Conservancy in 1973 with funds from Miss Katherine Ordway. The area was named after one of the subdivisions of the Hunkah, the Water People. This prairie was managed by annual haying prior to The Nature Conservancy purchase. The soils are deep silty loams with top soil from 7-10 inches deep and formed from shale residuum overlain by a thin layer of loess. The shale bedrock is over 60 inches below the surface. These soils are poorly drained due to a clay pan that occurs from 14-18 inches below the surface. There is a 10-acre lake located in the central portion of the area. The area was designated as a Missouri Natural Area Oct. 22, 1975.

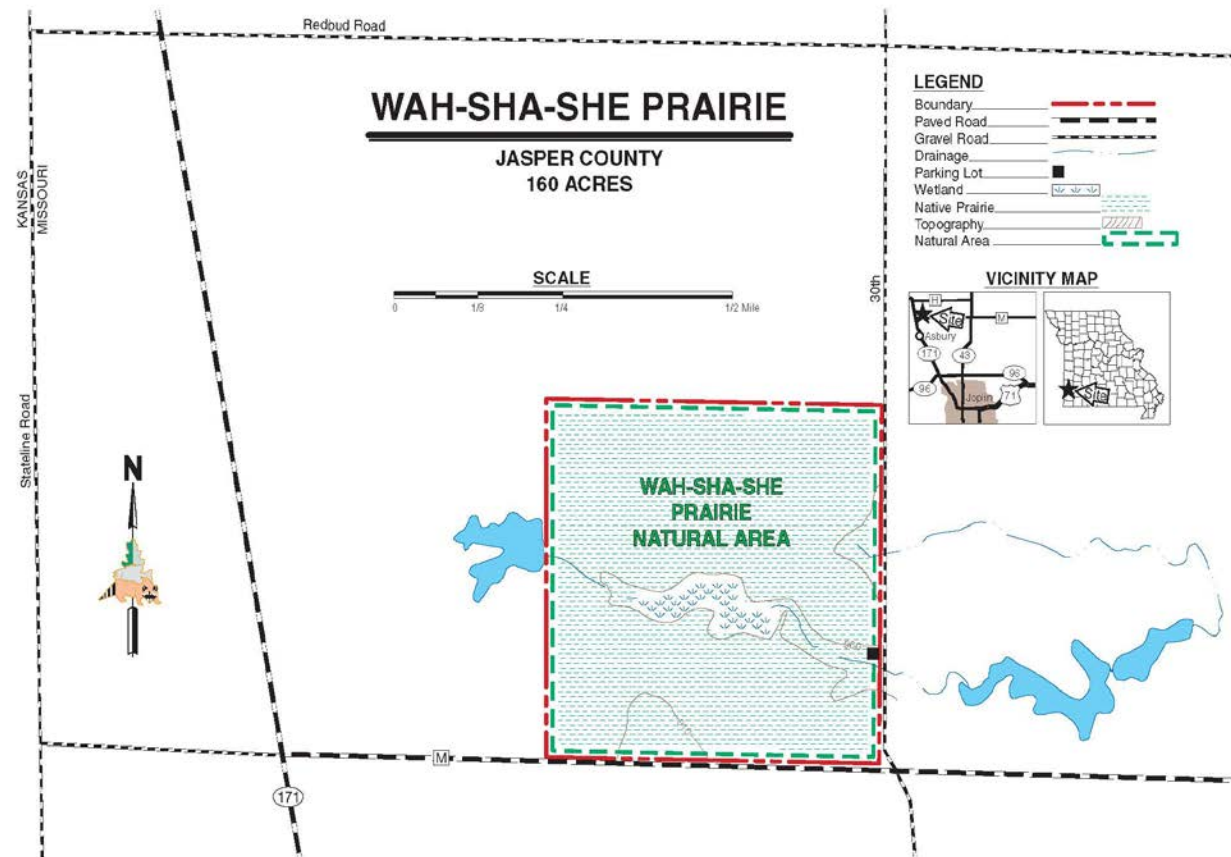
Legal Description: Township 30 North, Range 33 W, Section 31.

Area Location: Wah-Sha-She Prairie is located approximately 2 miles north of Asbury on Highway 171, then 1 mile east on Route M. Turn left at this intersection, and the parking lot is approximately 0.5 miles north.

Current Land and Water Types:

| Land/Water Type | Acres | Miles | % of Area |
|------------------|------------|-------|------------|
| Native Prairie | 150 | | 94 |
| Seasonal Wetland | 10 | | 6 |
| Total | 160 | | 100 |
| Stream Frontage | | 0.3 | |

Appendix 6. Map of Wah-Sha-She Prairie



Appendix 7. Pawhuska Prairie Area Background

Pawhuska Prairie was purchased by The Nature Conservancy in 1973 with funds from Miss Katherine Ordway. The area was named after the Osage word meaning “white-haired,” a name used by three Osage Chiefs (Paw-Hue-Skah). Prior to its purchase, the area was annually hayed. The soils on the area vary from a fine sandy loam to a silty loam. They were formed from sandstone or shale residuum. Bedrock varies from 0-50 inches below the surface. One seasonal spring occurs on the western portion of the area within the draw. The area was designated as a Missouri Natural Area Aug. 26, 1975.

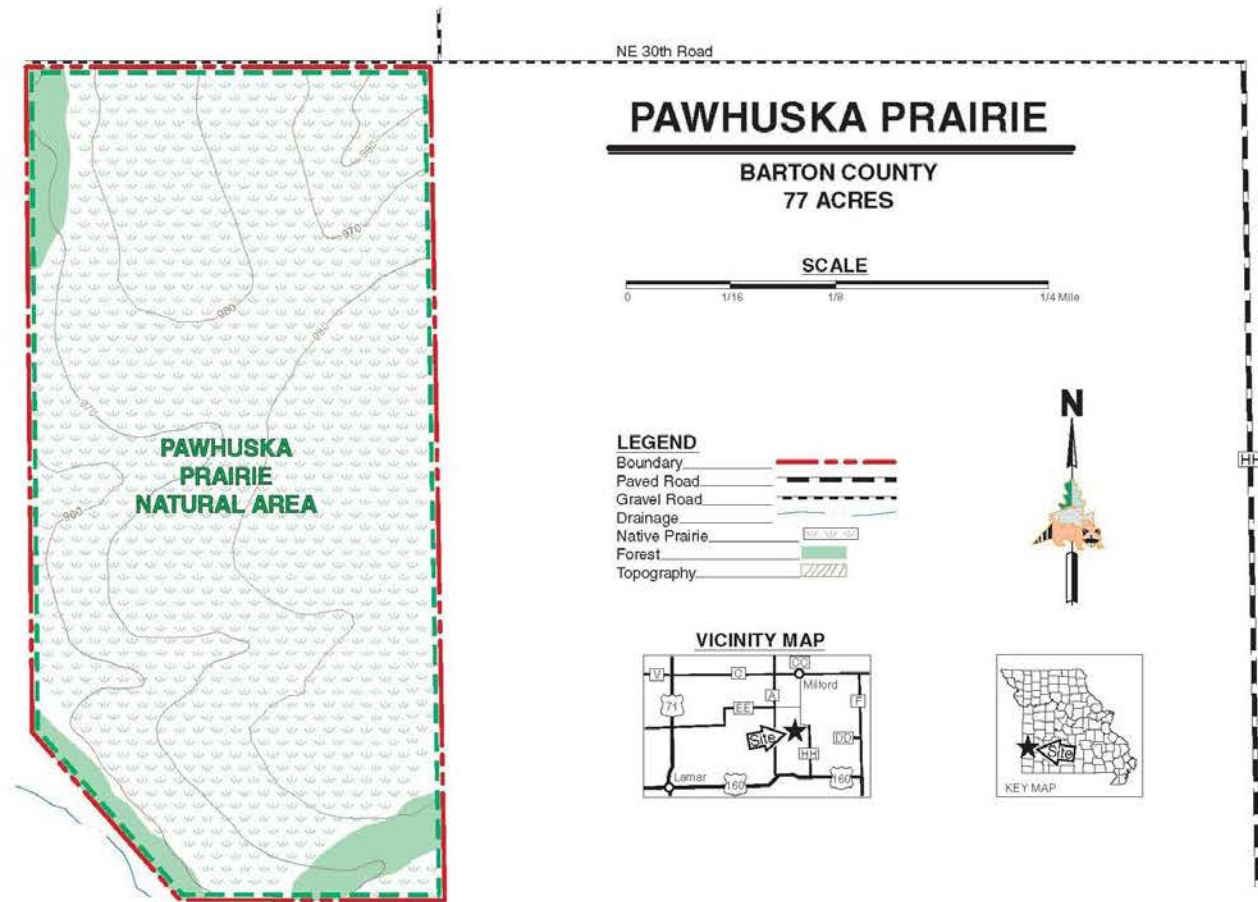
Legal Description: Township 32 North, Range 29 West, Section 7.

Area Location: Pawhuska Prairie is located approximately 5 miles east of Lamar on Highway 160 and 3 miles north on Route HH. Turn left on northeast 30th road. and go approximately 0.5 miles to the area.

Current Land and Water Types:

| Land/Water Type | Acres | Miles | % of Area |
|-----------------|-----------|-------|------------|
| Native Prairie | 72 | | 94 |
| Woods/Shrubs | 5 | | 6 |
| Total | 77 | | 100 |
| Stream Frontage | | 0.4 | |

Appendix 8. Map of Pawhuska Prairie



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